

2007-06-29 4661-0113PUS1_ST25.txt
SEQUENCE LISTING

<110> SINGH, Sarman
SIVAKUMAR, Ramu

<120> POLYPEPTIDES FOR THE DIAGNOSIS AND THERAPY OF LEISHMANIASIS

<130> 4661-0113PUS1

<140> US 10/584,451

<141> 2006-06-22

<160> 11

<170> PatentIn version 3.3

<210> 1

<211> 3016

<212> DNA

<213> Leishmania donovani

<400> 1

```

cggcgcgtcg gtgtctttga ttccactgat caccgcctcg ccatatgctc atcgtggtcc      60
aacgcgaccc ccctcccca aaggcaagcg agacgtatcg accatgccgt ctgcccgcac      120
ctgtgcttaa caagcgagcc aggtgtccct tccgcagctc cgaatctttc gcgtggcgcc      180
acacactgta tgagcgtcac tacccttgta tacctcagac cacttcccgc cgcccctcta      240
cccttctaca cgcctacaca cacatatgta tacatgaaca tctctcagca cacaacgcac      300
acatactgtg accggtatta ctgcaccaac gtctacctct tccacgatgc acccttctac      360
tgtgcggcgt gagggcgagc ggggtgaaggt gtcgggtgcgc gtgcgcccc tcaacgaccg      420
tgaaaacaat actgccgaag gggcgaaagt caccgtcgcg gcgaaacagg cggcggccgt      480
ggtaaccgtc aagttcatgg gaggcaccag caacagctgc cccgccgagt cgggggctgc      540
gaggcgggta acgcaggact tccagttcga ccacgtgttc tgggtctctgg agacgccgga      600
cgcgtgtggc gcgaccctg cgacgcaggc agacgtgttc cggacgatcg ggtaccgcgt      660
ggtgcagcac gcgttcgacg ggttcaactc gtgcctgttt gcgtacgggc agacggggag      720
cgggaagacg tacacgatga tgggtgcgga cgtgagcgcg cttagcggtg agggcagcgg      780
cgtgacgccg cggatctgcc tggagatctt tgcgcggaag gcgagcgtgg aggcacaggg      840
gcactcgcgg tggattgtgg agcccgggta cgtggaggtg tacaacgagc gcgtgtcgga      900
cctgcttggg aagcggaaga agggcgcgaa gggcggcacg gaggaggtgt acgtggacgt      960
gcgcgagcac ccgagccgcg gcgtgttcct ggaggggagc cggctggtgg aggttgggag     1020
cctggacgat gttgtgcggc tgatcgaggc cggcaacagc gtgcggcaca cggcctcgac     1080
gaagatgaac gaccggagca gccgtagcca cgcgatcatc atgctgctgc tgcgcgagga     1140
gcggacgatg acgacgaagg gcggagagac gatccgtact gccggcaaga gcagccgcac     1200
gaaccttggt gaccttgccg ggtctgagcg cgtggcgagc tcgcaggtgg agggacagca     1260

```

gttcaaggag gcgacgcaca tcaacctgtc gctgacgacg ctcgggctgtg tgatcgacgt	1320
gctcgcggac atggcaacga agggcgcgaa aacacagtac agcgttccgc cgttccgcga	1380
ctcgaagctg acgttcatcc tgaaggactc gcttggcggg aactcgaaga cgttcatggt	1440
tgcgactgtg agccccgagcg cgctgaacta cgaggagacg ctgagcacgc tgcggtacgc	1500
gtcgcgcgcg cgcgacattg tgaacgttgc gcaggtgaac gaggacccgc gcgcgcgtcg	1560
gatccgcgag ctggaggagc agatggagga catgcggcag gcgatggctg gcggtgaccc	1620
cgcgtagctg tctgagctga agaagaagct tgcgctgctg gagtcggagg cgcagaagtg	1680
tgcggcggac ctgcaggcgc tagagcggga gcgggagcac aaccagggtgc aggagcggct	1740
gctgcgcgcc acggaggcgg agaagagcga gctggagtcg cgtgcggctg cgctgcagga	1800
ggagatgacc gcgacgcgac agcaggcaga caagatgcag gcgctaaacc ttcggctgaa	1860
ggaagagcag gcgcgcaagg agcgagagct actgaaagag atggcgaaga aggacgccgc	1920
gctctcgaag gttcggcggc gcaaggatgc cgagatcgca agcgagcgcg agaagttgga	1980
gtcgaccgtg gcgcagcttg agcgtgaaca gcgcgagcgc gaggtcgctc tggacgcatt	2040
gcagacgcac cagagaaagc tgcaggaagc gctcgagagc tctgagcgga cagccgcgga	2100
aagggaccag cttctgcagc agcttacaga gcttcagtct gagcgtgcgc agctatcaca	2160
ggttgtcagc gaccgcgagc ggctgacccg cgacttgagc cgtattcagt ccgagtacgg	2220
ggaaacggag ctcgcgcgag acgcggcgct gtgcgccgca caggagatgg aggcgcgcta	2280
tcacgctgct gtgtttcacc tgcaaacgct cctggagctc gcaaccgagt gggaggatgc	2340
gctccgcgag cgtgcgcttg cagagcgtga cgaagccgct gcagctgaac ttgatgccgc	2400
agcttctact tctgaaaacg cacgggaaag cacttccaag ctgctaacca gcgttgagca	2460
gcagcttcgt gaatccgagg cgcgcgctgc ggagctgaaa gccgagctgg aggccactgc	2520
tgctgcgaag acgtcgggtg agcaggagcg tgagaagacg aggacggctc tggaggggcg	2580
cgctgcggag ctggctcgca aactggaggc gactgcttct gcgaagaatt tggtagagca	2640
ggaccgcgag aggacgaggg ccaccttgga ggaacgactt cgtattgctg aggtgcgcgc	2700
tgcgagctg gcaggagtgc tggaggccac tgctgctgcg aagacggcgg tggagcagga	2760
gcgtgagagg acgagggccg ccttggagca gcagctccgc gaatccgagg cgcgcgctgc	2820
ggagctggct gcgcagctgg aagccgctgc tgcggcgaag acgtcgggtg agcaggagcg	2880
tgagaacacg agggccacct tggaggagcg gttgcggctc gctgaggtcc gcgctgcgga	2940
gctggcagcg cggctaaaga gcactgctgc tgttaagtcc gcgatggagc aggaccgcga	3000
gaacacgagg gccacg	3016

<211> 2937

<212> DNA

<213> Leishmania donovani

<400> 2

cggcgcgtcg gtgtctttga ttgcacagct caccgcctcg ccatattttc gtcgtggcca	60
cgcgaccccc cgaccttccc ctctccgcc cccaaagaca agccagacat accgaccatg	120
ccgtctgccc gcgtctctgc ttaccaagcg cgccacgcac cccttcctcg gccctgaatc	180
tttcgcgcgg cgccatacat tgcattgcacg tcactacgcc tgtacacctt acacctctc	240
ttgcccaccc ctttccccctt ctacacgcct aactacacac acacacatat atatatataa	300
agcgtcaac gcacacatac tgtggccagt attactgcac caacgtctgc ctcttcagg	360
atgcaccctt cactgtgcg gcgtgaggcg gagcgggtga aggtgtcggg gcgcgtgcgc	420
cccctaaacg aacgtgaaaa caatgccccg gaagggacga aagtgaccgt tgcggcgaaa	480
caggcggccg ccgtggtgac ggtcaagggtc ctgggaggca gcaacaacag cggcgccgcc	540
gagtcgatgg ggactgcaag gcgggtagcg caggactttc agttcgacca cgtgttctgg	600
tctgtggaga cgccggacgc gtgcggcgcg acccccgca cgaggcaga cgtgttccgg	660
acgatcgggt acccgctggt gcagcacgcg ttcgacgggt tcaactcgtg cttgtttgcg	720
tacgggcaga cagggagcgg gaagatgtac acgatgatgg gcgcggacgt gagcgcgctt	780
agtgtgagg gcaacggcgt gacgccgcgg atctgcctgg agatctttgc gcggaaggcg	840
agcgtggagg cgaggggca ctgcgggtgg atcgtggagc tggggtacgt ggaggtgtac	900
aacgagcgcg tgtcggacct gcttgggaag cggaagaagg gtgtgaaggg cggcggcgag	960
gaggtgtacg tggacgtgcg cgagcaccgc agccgcggcg tgttcctgga ggggcagcgg	1020
ctggtggagg ttgggagcct ggacgatgtt gtgcggctga tcgagatcgg caacggcgtg	1080
cggcacaccg cttcaacgaa gatgaacgac cggagcagcc ggagccacgc gatcatcatg	1140
ctgctgctgc gcgaggagcg gacgatgacg acgaagagcg gggagacgat ccgtactgcc	1200
ggcaagagca gccgcatgaa ctttgtggac cttgcggggg ctaagcgcgt ggcgcagtcg	1260
caggtggagg ggcagcagtt caaggaggcg acgcacatca acctgtcgtg gacgacgctc	1320
gggcgcgtga tcgacgtgct cgcgacatg gcgacgaagg gtgcgaaggc gcagtacagc	1380
gttgccgctg tccgcgactc gaagctgacg ttcattcctga aggactcgtg tggcgggaac	1440
tcgaagacgt tcatgatcgc gactgtgagc ccgagcgcgc tgaactacga ggagacgctg	1500
agcacgctgc ggtacgcgtc gcgcgcgcgc gacattgtga atgttgcgca ggtgaacgag	1560
gacccgcgcg cacggcggat ccgcgagctg gaggagcaga tggaggacat gcggcaggcg	1620
atggctggcg gcgacccgcg gtacgtgtcg gagctgaaga agaagcttgc gctgctggag	1680
tcggaggcgc agaagcgtgc ggcggacctg caggcgtgg agaggagcg ggagcacaac	1740

2007-06-29 4661-0113PUS1_ST25.txt

caggtgcagg agcggctgct ggcgcgcgacg gaggcggaga agagcgagct ggagtcgcgt	1800
gctggctgctg tgcaggagga gatgaccgcg actcgacggc aggcggacaa gatgcaggcg	1860
ctgaacctgc ggctgaagga agagcaggcg cgcaaggagc gcgagctgct gaaagagatg	1920
gcgaagaagg acgccgcgct ctcgaagggt cggcaacgca aagacgccga gatagcaagc	1980
gagcgcgaga agctggagtc gaccgtggcg cagctggagc gtgagcagcg cgagcgcgag	2040
gtggctcttg acgcattgca gacgcaccag agaaagctgc aggaagcgct cgagagctct	2100
gagcggacag ccgcggaaag ggaccagctg ctgcagcagc taacagagct tcagtctgag	2160
cgtacgcagc tatcacaggt tgtgaccgac cgcgagcggc ttacacgcga cttgcagcgt	2220
attcagtacg agtacgggga aaccgagctc gcgcgagacg tggcgctgtg cgccgcgcag	2280
gagatggagg cgcgctacca cgctgctgtg tttcacctgc aaacgctcct ggagctcgca	2340
accgagtggg aggacgcact ccgcgagcgt gcgcttgagc agcgtgacga agccgctgca	2400
gccgaacttg atgccgcagc ctctacttcc caaaacgcac gtgaaagcgc ctgcgagcgg	2460
ctaaccagcc ttgagcagca gttcgtgac tccgaggagc gcgctgcgga gctgatgcgg	2520
aagttagagg cgactgctgc tgcgaagtcg tcggcggagc aggaccgcga gaacacgagg	2580
gccacgttgg agcagcagct tcgcgaatcc gaggagcacg ctgcggagct gaaggcccag	2640
ctggagtcca ctgctgctgc gaagacgtcg gcggagcagg accgcgagaa cacgagggcc	2700
gcgttgagagc agcggcttcg cgaatccgag gagcgcgctg cggagctggc gagccagctg	2760
gaggccactg ctgctgcgaa gtcgtcggcg gagcaggacc gcgagaacac gagggccacg	2820
ctagagcagc agcttcgcga atccgaggcg cgcgctgcgg agctggcgag tcagctggag	2880
tccactgctg ctgcgaagtc gtcggcggag caggaccgcg agaacacgag ggccacg	2937

<210> 3
 <211> 563
 <212> DNA
 <213> Leishmania donovani

<400> 3	
tcgtggccct cgtgttctcg cggtcctgct ccatcgcgga cttaacagca gcagtgtctt	60
ttagccgcgc tgccagctcc gcagcgcgga cctcagcgag ccgcaaccgc tcctccaagg	120
tggccctcgt gttctcacgc tcctgctcca ccgacgtctt cgccgcagca gcggcttcca	180
gctgcgcagc cagctccgca gcgcgcgcct cggattcgcg gagctgctgc tccaaggcgg	240
ccctcgtcct ctcacgctcc tgctccaccg ccgtcttcgc agcagcagtg gcctccagca	300
ctcctgccag ctccgcagcg cgcacctcag caatacgaag tcgttcctcc aaggtggccc	360
tcgtcctctc gcggtcctgc tctaccaaatt tcttcgcaga agcagtcgcc tccagtttgc	420
gagccagctc gcgagcgcgc ccctccagag ccgtcctcgt cttctcacgc tcctgctcca	480

ccgacgtctt cgcagcagca gtggcctcca gtcggtctt cagctccgca gcgcgcgtct 540
cggagtcacg aagctgctgc tca 563

<210> 4
<211> 466
<212> DNA
<213> Leishmania donovani

<400> 4
gagcagcagc ttcgtgactc cgaggagcgc gctgcggagc tgatgcggaa gttagaggcg 60
actgctgctg cgaagtcgtc ggaggagcag gaccgcgaga acacgagggc cacgttggag 120
cagcagcttc gcgaatccga ggagcacgct gcggagctga aggcccagct ggagtccact 180
gctgctgcca agacgtcggc ggagcaggac cgcgagaaca cgagggccgc gttggagcag 240
cggcttcgcg aatccgagga gcgcgctgcg gagctggcga gccagctgga ggccactgct 300
gctgcgaagt cgtcggcgga gcaggaccgc gagaacacga gggccacgct agagcagcag 360
cttcgcgaat ccgaggcgcg cgctgcggag ctggcgagtc agctggagtc cactgctgct 420
gcgaagtcgt cggcggagca ggaccgcgag aacacgaggg ccacga 466

<210> 5
<211> 187
<212> PRT
<213> Leishmania donovani

<400> 5

Glu Gln Gln Leu Arg Glu Ser Glu Ala Arg Ala Ala Glu Leu Lys Ala
1 5 10 15

Glu Leu Glu Ala Thr Ala Ala Ala Lys Thr Ser Val Glu Gln Glu Arg
20 25 30

Glu Lys Thr Arg Thr Ala Leu Glu Gly Arg Ala Ala Glu Leu Ala Arg
35 40 45

Lys Leu Glu Ala Thr Ala Ser Ala Lys Asn Leu Val Glu Gln Asp Arg
50 55 60

Glu Arg Thr Arg Ala Thr Leu Glu Glu Arg Leu Arg Ile Ala Glu Val
65 70 75 80

Arg Ala Ala Glu Leu Ala Gly Val Leu Glu Ala Thr Ala Ala Ala Lys
85 90 95

Thr Ala Val Glu Gln Glu Arg Glu Arg Thr Arg Ala Ala Leu Glu Gln
100 105 110

Gln Leu Arg Glu Ser Glu Ala Arg Ala Ala Glu Leu Ala Ala Gln Leu
 115 120 125

Glu Ala Ala Ala Ala Lys Thr Ser Val Glu Gln Glu Arg Glu Asn
 130 135 140

Thr Arg Ala Thr Leu Glu Glu Arg Leu Arg Leu Ala Glu Val Arg Ala
 145 150 155 160

Ala Glu Leu Ala Ala Arg Leu Lys Ser Thr Ala Ala Val Lys Ser Ala
 165 170 175

Met Glu Gln Asp Arg Glu Asn Thr Arg Ala Thr
 180 185

<210> 6
 <211> 155
 <212> PRT
 <213> Leishmania donovani

<400> 6

Glu Gln Gln Leu Arg Asp Ser Glu Glu Arg Ala Ala Glu Leu Met Arg
 1 5 10 15

Lys Leu Glu Ala Thr Ala Ala Ala Lys Ser Ser Ala Glu Gln Asp Arg
 20 25 30

Glu Asn Thr Arg Ala Thr Leu Glu Gln Gln Leu Arg Glu Ser Glu Glu
 35 40 45

His Ala Ala Glu Leu Lys Ala Gln Leu Glu Ser Thr Ala Ala Ala Lys
 50 55 60

Thr Ser Ala Glu Gln Asp Arg Glu Asn Thr Arg Ala Ala Leu Glu Gln
 65 70 75 80

Arg Leu Arg Glu Ser Glu Glu Arg Ala Ala Glu Leu Ala Ser Gln Leu
 85 90 95

Glu Ala Thr Ala Ala Ala Lys Ser Ser Ala Glu Gln Asp Arg Glu Asn
 100 105 110

Thr Arg Ala Thr Leu Glu Gln Gln Leu Arg Glu Ser Glu Ala Arg Ala
 115 120 125

Ala Glu Leu Ala Ser Gln Leu Glu Ser Thr Ala Ala Ala Lys Ser Ser
 130 135 140

Ala Glu Gln Asp Arg Glu Asn Thr Arg Ala Thr
 145 150 155

<210> 7
 <211> 21
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 7
 cggcgcgtcg gtgtctttga t 21

<210> 8
 <211> 20
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 8
 aggtccgccg cacgcttctg 20

<210> 9
 <211> 22
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 9
 gcgggaactc gaagacgttc at 22

<210> 10
 <211> 21
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 10
 gagcagcagc ttcgtgactc c 21

<210> 11
 <211> 20
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 11
 cgtggccctc gtgttctcgc 20

2007-06-29 4661-0113PUS1_ST25.txt